

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-27 (canceled)

28. (currently amended) A soil compaction roller comprising a hub structure defining a central axis of rotation and a multi-sided, out-of-round, peripheral compacting surface which has a width measured parallel to the axis and which is fixed non-adjustably to an outer periphery of the hub structure so as to be capable of rolling in a direction of rolling over a soil surface that is to be compacted when the hub structure rotates about the central axis, the compacting surface being defined by a plurality of angularly spaced salient points and an equal plurality of compacting faces each of which is, the salient points being defined at the ends of respective radii of the roller, each such radius constituting a maximum radius of the compacting surface and being larger than the maximum radii of the compacting faces, each compacting face being generally outwardly convex in shape and each of which extends generally convex compacting face extending from one salient point to an adjacent salient point, each salient point extending parallel to the central axis, the cross-section of each generally convex compacting face arranged such that an instantaneous center of rotation of each generally convex compacting face, where that generally convex compacting face contacts the soil surface during rolling, moves continuously about the full extent of the generally convex compacting face, whereby the roller applies a continuous kneading action to the soil surface at all angular positions thereof as it rolls over the soil surface. ~~[[.]]each compacting face including a re-entrant portion extending from a respective salient point in the direction of rolling and defining a tangent lying outside of an imaginary straight line extending from such salient point to the next salient point in the direction of rolling.~~

29. (previously presented) A soil compaction roller according to claim 28 wherein compacting faces on either side of each salient point are symmetrical with respect to one another about a plane containing the central axis and that salient point.

30. (previously presented) A soil compaction roller according to claim 28 wherein each compacting face is symmetrical about an imaginary radial line extending through the compacting face at a location thereof situated midway between the salient points lying on opposite sides of that compacting face.

31. (previously presented) A soil compaction roller according to claim 30 wherein the salient points are equi-angularly spaced about the central axis and are equidistant from that axis.

32. (previously presented) A soil compaction roller according to claim 31 wherein each compacting face is smoothly, convexly curved.

33. (previously presented) A soil compaction roller according to claim 31 wherein each compacting face comprises a plurality of flat facets which in combination form an outwardly convex shape.

34. (canceled)

35 (previously presented) A soil compaction roller according to claim 34 wherein the hub structure comprises a central hub, a plurality of spokes extending outwardly from the central hub, and stiffening ribs carried by the spokes at the periphery of the hub structure, to which ribs the wear plates are mounted.

36. (canceled)

37. (currently amended) A soil compaction machine including a pair of soil compaction rollers mounted side by side with one another, each soil compaction roller comprising a hub structure defining a central axis of rotation, a multi-sided, out-of-round, peripheral compacting surface which has a width measured parallel to the axis and which is fixed non-adjustably to an outer periphery of the hub structure so as to be capable of rolling over a soil surface that is to be compacted when the hub structure rotates about the central axis, the compacting surface being defined by a plurality of angularly spaced salient points and an equal plurality of compacting faces, the salient points being defined at the ends of respective radii of the roller, each such radius constituting a maximum radius of the compacting surface and being larger than the maximum radii of the compacting faces, each compacting face being generally ~~each of which is~~ outwardly convex in shape and ~~each of which~~ extends generally convex compacting face extending continuously from one salient point to an adjacent salient point, each salient point extending parallel to the central axis, the cross-section of each generally convex compacting surface being constant across a width thereof measured parallel to the axis and being arranged such that an instantaneous center of rotation of each generally convex compacting face, where that compacting face contacts the soil surface during rolling, moves continuously about the full extent of the generally convex compacting face, whereby the roller applies a continuous kneading action to the soil surface at all angular positions thereof as it rolls over the soil surface, wherein each compacting face is symmetrical about an imaginary radial line extending through the compacting face at a location thereof situated midway between the salient points lying on opposite sides of that compacting face.